WATTENBERG DISPOSAL, LLC

WORLD TRADE CENTER

1675 BROADWAY, 28TH FLOOR

DENVER, COLORADO 80202-4628

TELEPHONE (303) 825 4822

FACSIMILE (303) 825-4825

WWW.KPK.COM

April 14, 2015

Mr. Don Breffle
United States EPA Region 8
8OC-EISC
1595 Wynkoop Street
Denver, CO 80202-1129

RE: Wattenberg Disposal, LLC
Suckla Farms Injection Well #1 – 2015 1st Quarter Report
Pressure Fall-Off Test, Third Party Environmental Audit

Dear Mr. Breffle;

Enclosed please find Wattenberg Disposal, LLC's (Wattenberg) Quarterly Injection Report for the period of January 1, 2015 through March 31, 2015 for the Suckla Farms Injection Well #1 facility (facility) located in the SWNW Section 10, T1N, R67W, in Weld County, Colorado.

Monthly analysis of waste fluid stored at the facility performed by Accutest Consulting Services has been included within the attached quarterly report. Comparison of the waste fluid analyses with the established three (3) year baseline has been included within the quarterly report. A slight change in Total Dissolved Solids was observed during the sampling process for January 2015.

The required annual pressure fall off test was completed in March by Integrated Petroleum Technologies, Inc. The results of the pressure fall off test have been included within the quarterly report. In addition to the pressure fall-off test, Wattenberg contracted Enertia Consulting Group, LLC (Enertia) to perform an annual third party environmental audit of the facility. A complete copy of Enertia's environmental audit has been included within the quarterly report.

Please note that no seismic events with a magnitude of 2.5 or greater were recorded by the U.S. Geological Survey within fifty (50) miles of the facility.

If you have any questions or need additional information, please do not hesitate contacting me at 303-825-4822 or slaramesa@kpk.com

Sincerely,

Susana Lara-Mesa
VP of Engineering

CC: Eric Jacobs, CDPHE
Stuart Ellsworth, COGCC
James Taloumis, WCDPHE
KPK files

U2 Entered
Date 4/29/15
Initial DB

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April 14, 2015

Mr. Stuart Ellsworth
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

RE: Wattenberg Disposal, LLC
Suckla Farms Injection Well #1 – 2015 1st Quarter Report
Pressure Fall-Off Test

Dear Mr. Ellsworth;

Enclosed please find Wattenberg Disposal, LLC's Quarterly Injection Report for the period of January 1, 2015 through March 31, 2015 for the Suckla Farms Injection Well #1 facility ("the facility") located in the SWNW Section 10, T1N, R67W, in Weld County, Colorado.

In addition to the Quarterly Injection Report, monthly analyses of the stored waste fluid performed by Accutest Consulting Services has also been attached along with the results of the required annual pressure fall-off test performed in March of 2015.

Please note for your records that Wattenberg Disposal, LLC is the owner of the above-referenced Class I UIC commercial injection facility, which is under the joint jurisdiction of the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE). Wattenberg Disposal, LLC provides Quarterly and other reports to your agency as a courtesy only.

If you have any questions or need additional information, please do not hesitate contacting me at 303-825-4822 or slaramesa@kpk.com.

Sincerely,

Susana Lara-Mesa
VP of Engineering

Cc: Don Breffle, EPA
James Taloumis, WCDPHE
Eric Jacobs, CDPHE
KPK files

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April 14, 2015

Mr. James Taloumis
Environmental Health Specialist
Weld County Department of Public Health and Environment
1555 North 17th Ave.
Greeley, CO 80631

RE: Wattenberg Disposal, LLC
Suckla Farms Injection Well #1 – 2015 1st Quarter Report
Pressure Fall-Off Test, Third Party Environmental Audit

Dear Mr. Taloumis;

Enclosed please find Wattenberg Disposal, LLC's (Wattenberg) Quarterly Injection Report for the period of January 1, 2015 through March 31, 2015 for the Suckla Farms Injection Well #1 facility (facility) located in the SWNW Section 10, T1N, R67W, in Weld County, Colorado.

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Sincerely,

Susana Lara-Mesa
VP of Engineering

Cc: Don Breffle, EPA
Eric Jacobs, CDPHE
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DENVER, COLORADO 80202-4628

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FACSIMILE (303) 825-4825

WWW.KPK.COM

April 14, 2015

Mr. Eric Jacobs
Colorado Department of Public Health and Environment
HM-WMD-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530

RE: Wattenberg Disposal, LLC
Suckla Farms Injection Well #1 – 2015 1st Quarter Report
Pressure Fall-Off Test, Third Party Environmental Audit

Dear Mr. Jacobs;

Enclosed please find Wattenberg Disposal, LLC's (Wattenberg) Quarterly Injection Report for the period of January 1, 2015 through March 31, 2015 for the Suckla Farms Injection Well #1 facility (facility) located in the SWNW Section 10, T1N, R67W, in Weld County, Colorado.

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If you have any questions or need additional information, please do not hesitate contacting me at 303-825-4822 or slaramesa@kpk.com

Sincerely,

Susana Lara-Mesa
VP of Engineering

Cc: Don Breffle, EPA
James Taloumis, WCDPHE
Stuart Ellsworth, COGCC
KPK files

ENERTIA CONSULTING GROUP LLC

1529 Market Street, Suite 200
Denver, CO 80202
720•473•3131
sean.ohearn@enertiacg.com

April 16, 2015

Ms. Susana Lara-Mesa
K.P. Kauffman Company, Inc.
1675 Broadway, Suite 2800
Denver, Colorado 80202

RE: Environmental Audit Wattenberg Disposal Facility
Suckla Farms Injection Well No. 1
4468 County Road 19, Weld County, Colorado

Dear Ms. Lara-Mesa:

Per your request, Enertia Consulting Group, LLC (Enertia) performed an environmental audit at the Wattenberg Disposal Facility/Suckla Farms Injection Well No. 1 site at 4468 County Road 19, Weld County, Colorado (the Wattenberg Facility), generally located in the SE ¼ of the SE ¼ of the NW ¼ of Section 10, Township 1 North, Range 67 West of the 6th Principal Meridian. The purpose of the audit was to evaluate the adequacy of the Wattenberg Facility's surface operation and maintenance in preventing shallow groundwater contamination as required by the United States (U.S.) Environmental Protection Agency (EPA) Underground Injection Control (UIC) Permit #C 1516-2115.

The audit consisted of:

- Visual site inspection and photo documentation of the Wattenberg Facility conducted on April 10, 2015;
- Interview with Wattenberg Facility staff;
- Review of Apex Consulting Services, Inc. (APEX) groundwater monitoring data (gathered in June and December 2014); and
- Review of Walkthrough Inspection of Tank and Valve Forms.

Background

The Facility was originally constructed in 1972 by the Amoco Production Company to dispose of production water from oil and gas wells in the Denver-Julesburg (DJ) Basin. Current operations at the Facility include the deep injection disposal of non-hazardous Class I and Class II liquid waste as defined in 40 Code of Federal Regulations (CFR)

144.6. The operation at the Facility generally consists of injecting water produced from oil and gas operation and nonhazardous industrial waste into the Lyons Formation between depths of 9,276 feet and 9,418 feet below ground surface (bgs). A shallow groundwater monitoring plan for the Facility was prepared by National Environmental Services, Inc. (NES), dated January 3, 2002. The shallow groundwater monitoring plan was subsequently approved by the CDPHE.

Site Inspection

During the April 10th site inspection, Enertia visually checked for leakage or other releases at each installation having the potential to impact the environment. The installations included the tank farm and secondary containment areas, pump building, sumps, surface pipes, off-load pad, storage building, and injection well house. Photographs taken during the site inspection are provided in Attachment 1. Enertia did not observe obvious evidence of staining, odors, dead/stressed vegetation, or releases to the environment from the surface operation and maintenance at the Wattenberg Facility.

Interviews

An Interview with Facility personnel yielded the following information regarding the prevention of groundwater contamination.

- Mr. Bill Teter is an attendant at the Wattenberg Facility. He reported that, to his knowledge, there have been no significant environmental incidents at the Facility or environmental impacts to the property since the 2014 inspection.

Report Review

As part of the audit we reviewed daily records and reports prepared by on-site staff, and APEX. A brief summary or our review is presented below:

- Daily Reporting - The Daily Evaluation and Daily Visual Walkthrough Inspection on Tanks and Valves Sheets logged the volume of barrels injected during 2014 and any release or evidence of leak. No releases or evidence of leaks were recorded in 2014.

- Groundwater Reporting - Enertia reviewed the APEX June and December 2014 groundwater monitoring reports for the Wattenberg Facility (Attachment 2). The letter reports indicate that groundwater samples were collected from observation wells OW-1, 2, 3 and 4 on June 23, 2014 and December 9, 2014. The

groundwater samples were analyzed for calcium, magnesium, potassium, sodium, chloride, nitrate, nitrite, sulfate, Total Organic Carbon (TOC), bicarbonate, carbonate, benzene, toluene, ethylbenzene, total xylenes (BTEX), and total petroleum hydrocarbons (TPH).

- *Summary of June 2014 Sampling as Reported in the July 18, 2014 Apex Groundwater Monitoring Report* - Shallow groundwater was measured during the June sampling event at depths ranging from approximately 8.5'bgs (OW-1) to 20.7'bgs (OW-4). Regarding water quality, the groundwater monitoring results were consistent with results obtained during previous monitoring events except for sulfate and benzene. The sulfate concentration in OW-1 was less than historical concentrations. Benzene was detected at concentrations of 45.5 µg/L and 2.6 µg/L in the samples collected from OW-1 and OW-3, respectively. In addition, ethylbenzene was detected at a concentration of 1.7 µg/L in the sample collected from OW-1. Based on information provided by APEX, the elevated concentrations of contaminants of concern were determined to originate from an off-site source. In accordance with the Wattenberg Facility groundwater monitoring plan, confirmatory samples were collected and analyzed for BTEX compounds. Samples were collected from OW-1 on July 9, 2014 and from OW-3 on July 16, 2014. Benzene was detected at a concentration of 12 µg/L in the confirmatory sample collected from OW-1. The OW-3 sample results indicated that BTEX compounds were not detected above method detection limits.

- *Summary of December 2014 Sampling as Reported in the January 9, 2015 Apex Groundwater Monitoring Report* - During the December sampling event shallow groundwater was measured at depths ranging from approximately 11.7'bgs (OW-1) to 20.3'bgs (OW-4). Regarding water quality, the groundwater monitoring results were consistent with results obtained during previous monitoring events. Benzene concentrations of 0.96 µg/L and 1.6 µg/L were reported in OW-1 and OW-2, respectively. In accordance with the Wattenberg Facility groundwater monitoring plan, confirmatory samples were collected and analyzed for BTEX compounds. Samples were collected from OW-1 and OW-2 on January 2, 2015. The sample results indicated that BTEX compounds were not detected above method detection limits.

The APEX January 9, 2015 letter report indicated the next semi-annual groundwater monitoring event was scheduled for June 2015.

Conclusions and Recommendations

Enertia identified no obvious evidence of significant spills, releases, or other on-site surface activities that may result in impacts to shallow groundwater quality. The semi annul groundwater monitoring program provides continued surveillance for shallow groundwater impacts.

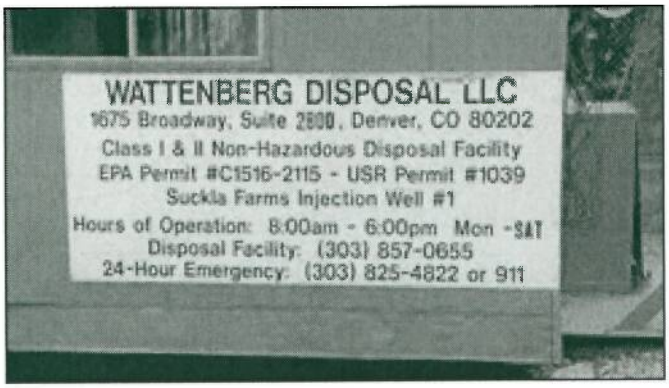
We trust that this Environmental Audit is acceptable and complete. Please contact me at (720) 473-3131 or sean.ohearn@enertiacg.com should you have any questions on the content of the audit.

Sincerely,
ENERTIA CONSULTING GROUP, LLC

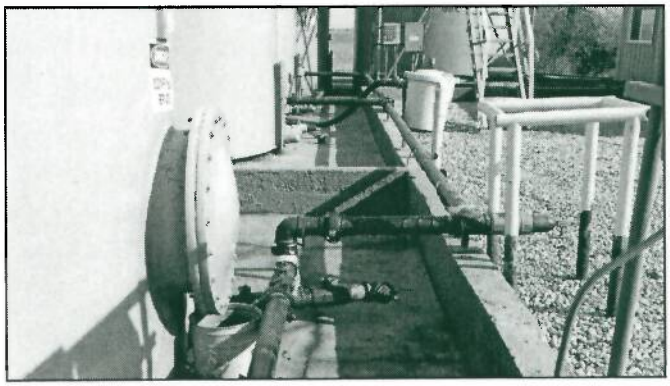
Sean O'Hearn, PE, PG
Managing Partner

Attachment 1 – Site Photographs
Attachment 2 – Apex Consulting Services, Inc. June and December 2014 Groundwater Monitoring Reports, Wattenberg Facility, Weld County, Colorado

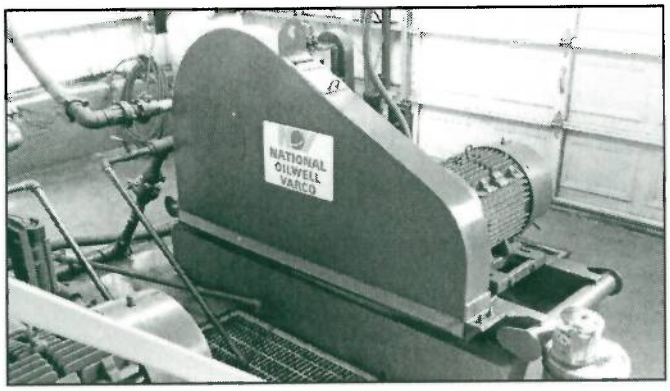
Attachment 1
Facility Photographs - Suckla Farms Injection Well No. 1
April 10, 2015



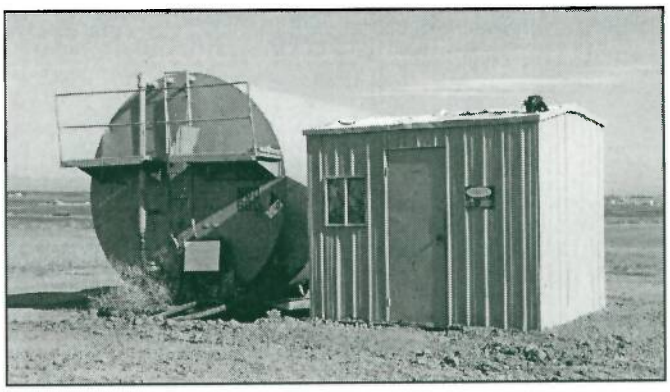
Facility Information
Suckla Farms Injection Well No.1



Holding Tank Piping (typ)



Pump House



Injection No.1

Holding Tank - Secondary Containment Area

KPK
K.P. KAUFFMAN COMPANY, INC.

Mountain States ACCUTEST LABORATORIES

04/06/15

Technical Report for

K.P. Kauffman Company, Inc.

Wattenberg Tank

Accutest Job Number: D69171

Sampling Date: 03/30/15

Report to:

K.P. Kauffman Company, Inc.
1675 Broadway Suite 2800
Denver, CO 80202-4628
slaramesa@kpk.com; mhattel@msn.com

ATTN: Susana Lara-Mesa

Total number of pages in report: 28

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY

Sections: 1 2 3 4 5 6 7

Table of Contents

Accutest Laboratories

Sample Summary

K.P. Kauffman Company, Inc.

Job No: D69171

Wattenberg Tank

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
D69171-1	03/30/15	10:30	MH	03/30/15	AQ	Water	TANK-I
D69171-1F	03/30/15	10:30	MH	03/30/15	AQ	Water Filtered	TANK-I

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffman Company, Inc.	**Job No**	D69171
Site:	Wattenberg Tank	**Report Date**	4/6/2015 12:03:43 PM

On 03/30/2015, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D69171 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP15576

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D69098-1FMS, D69098-1FMSD, D69098-1FSDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Potassium are outside control limits for sample MP15576-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP15576-SD1 for Calcium: Serial dilution indicates possible matrix interference.

Wet Chemistry By Method ASTM D287

Matrix: ALL **Batch ID:** GN29316

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP14951

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D69022-1MS were used as the QC samples for the HEM Oil and Grease analysis.

Wet Chemistry By Method EPA 300.0/SW846 9056

Matrix: AQ **Batch ID:** GP14954

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D69186-3BMS, D69186-3BMSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate analysis.
- D69171-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.
- D69171-1 for Sulfate: Elevated detection limit due to matrix interference.
- D69171-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM 2540C-2011

Matrix: AQ	Batch ID: GN29294

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D69024-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM 5310B-2011

Matrix: AQ	Batch ID: GP14986

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D69277-3DUP, D69277-3MS, D69277-3MSD were used as the QC samples for the Total Organic Carbon analysis.

Wet Chemistry By Method SM4500HB+-2011/9040C

Matrix: AQ	Batch ID: GN29312

- The following samples were run outside of holding time for method SM4500HB+-2011/9040C: D69171-1 Analysis performed past the required 15 minutes from collection time/holding time.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D69171
Account: K.P. Kauffman Company, Inc.
Project: Wattenberg Tank
Collected: 03/30/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D69171-1	TANK-I					
Chloride		10900	500		mg/l	EPA 300.0/SW846 9056
HEM Oil and Grease		625	4.9		mg/l	EPA 1664A
Solids, Total Dissolved		17800	10		mg/l	SM 2540C-2011
Specific Gravity by Hydrometer		1.0114				ASTM D287
Total Organic Carbon		112	20		mg/l	SM 5310B-2011
pH [a]		6.99			su	SM4500HB+-2011/9040C
D69171-1F	TANK-I					
Calcium		216000	20000		ug/l	SW846 6010C
Magnesium		30400	10000		ug/l	SW846 6010C
Potassium		95500	50000		ug/l	SW846 6010C
Sodium		6470000	20000		ug/l	SW846 6010C

(a) Analysis performed past the required 15 minutes from collection time/holding time.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	TANK-I		
Lab Sample ID:	D69171-1	Date Sampled:	03/30/15
Matrix:	AQ - Water	Date Received:	03/30/15
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10900	500	mg/l	1000	03/31/15 11:50	AS	EPA 300.0/SW846 9056
HEM Oil and Grease	625	4.9	mg/l	1	04/01/15	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 5.0	5.0	mg/l	500	03/31/15 10:24	AS	EPA 300.0/SW846 9056
Nitrogen, Nitrite [a]	< 4.0	4.0	mg/l	1000	03/31/15 11:50	AS	EPA 300.0/SW846 9056
Solids, Total Dissolved	17800	10	mg/l	1	03/31/15	AK	SM 2540C-2011
Specific Gravity by Hydromete	1.0114			1	04/01/15	TJ	ASTM D287
Sulfate [a]	< 250	250	mg/l	500	03/31/15 10:24	AS	EPA 300.0/SW846 9056
Total Organic Carbon	112	20	mg/l	20	04/03/15 14:50	AK	SM 5310B-2011
pH [b]	6.99		su	1	04/01/15 08:20	TB	SM4500HB+-2011/9040C

(a) Elevated detection limit due to matrix interference.
(b) Analysis performed past the required 15 minutes from collection time/holding time.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TANK-I		
Lab Sample ID:	D69171-1F	Date Sampled:	03/30/15
Matrix:	AQ - Water Filtered	Date Received:	03/30/15
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	216000	20000	ug/l	5	03/31/15	04/01/15	KV	SW846 6010C [1]	SW846 3010A [2]
Magnesium	30400	10000	ug/l	5	03/31/15	04/01/15	KV	SW846 6010C [1]	SW846 3010A [2]
Potassium	95500	50000	ug/l	5	03/31/15	04/01/15	KV	SW846 6010C [1]	SW846 3010A [2]
Sodium	6470000	20000	ug/l	5	03/31/15	04/01/15	KV	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5952
(2) Prep QC Batch: MP15576

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # D69171

Client / Reporting Information

Company Name	K.P. Kauffman Company, Inc.
Address	1675 Broadway, Suite 2800
City / State / Zip	Denver CO 80202-4628
Project Contact	Susana Lara-Mesa SLaraMesa@kpk.com
Phone #	303-825-4822
Samplers's Name	MICHAEL HATTEL (303-665-1400)

Project Information

Project Name:	WATTENBERG TANK
Street	
City / State	Fort Lupton CO
Project #	
Fax #	
Client Purchase Order #	7591

Accutest Sample #	Field ID / Point of Collection	SUMMA # MEOH Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	pH	CATIONS (Ca, K, Mg, NA)	SPECIFIC GRAVITY	TDS	TOC	LAB USE ONLY
	TANK - I		3/30/15	1030	MDH	LIQ	7	X			X					X	X	X	X	X	X	X	01

Matrix Codes: DW- Drinking Water; GW- Ground Water; WW- Water; SW- Surface Water; SO- Soil; SL-Sludge; OI-Oil; LIQ- Other Liquid; AIR- Air; SOL-Other Solid; WP-Wipe

Turnaround Time (Business days)

[X] Std. 10 Business Days

Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

[ ] Commercial "A" [ ] FULL CLP
[ ] Commercial "B" [ ] NYASP Category A
[ ] NJ Reduced [ ] NYASP Category B
[ ] NJ Full [ ] State Forms
[x] Hard Copy [x] PDF

Comments / Remarks

PDF copy to Mike Hattel with APEX at mhattel@msn.com

PDF copy to Susan Lara-Mesa with KPK at Slaramesa@kpk.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	3/30/15 1140	1 [signature] 3/30/15 11:40	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # ND	Preserved where applicable [x]	On Ice [x] Cooler Temp. 3.4 T080

5.1

5

D69171: Chain of Custody
Page 1 of 1

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	8.6	41		
Antimony	30	3.2	19		
Arsenic	25	5.2	5.6		
Barium	10	1.4	1.4		
Beryllium	10	.8	1.2		
Boron	50	6.7	6.6		
Cadmium	10	.4	.36		
Calcium	400	2.2	41	31.8	<400
Chromium	10	.4	.4		
Cobalt	5.0	.4	.57		
Copper	10	1.2	1.9		
Iron	70	2.2	9.5		
Lead	50	3.6	21		
Lithium	5.0	1.9	2.7		
Magnesium	200	14	19	3.9	<200
Manganese	5.0	.01	.46		
Molybdenum	10	.8	.84		
Nickel	30	.9	.87		
Phosphorus	100	15	20		
Potassium	1000	130	270	10.0	<1000
Selenium	50	8.8	11		
Silicon	50	5.2	5.2		
Silver	30	.4	.6		
Sodium	400	4.9	170	12.1	<400
Strontium	5.0	.01	.12		
Thallium	10	2.9	4		
Tin	50	13	16		
Titanium	10	.15	2.1		
Uranium	50	3.7	5.5		
Vanadium	10	.4	.4		
Zinc	30	.6	3.2		

Associated samples MP15576: D69171-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	RL	IDL	MDL	MB raw	final

(anr) Analyte not requested

6.1.1

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	D69098-1F Original MS		Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium	anr				
Beryllium					
Boron					
Cadmium					
Calcium	1400	28600	25000	108.8	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	737	27500	25000	107.1	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium	229	26000	25000	103.1	75-125
Selenium					
Silicon					
Silver					
Sodium	245	25900	25000	102.6	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP15576: D69171-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	D69098-1F Original MS	Spikelot ICPALL2 % Rec	QC Limits

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

6.1.2
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	D69098-1F Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium	anr					
Beryllium						
Boron						
Cadmium						
Calcium	1400	28600	25000	108.8	0.0	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	737	27500	25000	107.1	0.0	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium	229	26000	25000	103.1	0.0	20
Selenium						
Silicon						
Silver						
Sodium	245	25700	25000	101.8	0.8	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP15576: D69171-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	D69098-1F Original MSD	Spikelot ICPALL2 % Rec	MSD RPD	QC Limit

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

6.1.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	anr			
Beryllium				
Boron				
Cadmium				
Calcium	27500	25000	110.0	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	26900	25000	107.6	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	25700	25000	102.8	80-120
Selenium				
Silicon				
Silver				
Sodium	25500	25000	102.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP15576: D69171-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

Metal	D69098-1F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium	anr			
Beryllium				
Boron				
Cadmium				
Calcium	1400	1590	13.6*(a)	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	737	770	4.5	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	229	0.00	100.0(b)	0-10
Selenium				
Silicon				
Silver				
Sodium	245	237	3.6	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP15576: D69171-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP15576
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 03/31/15

	D69098-1F		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP14954/GN29308	0.50	0.0	mg/l	5	5.10	102.0	90-110%
Fluoride	GP14954/GN29308	0.10	0.0	mg/l	1	1.02	102.0	90-110%
HEM Oil and Grease	GP14951/GN29301	5.0	0.0	mg/l	40	36.3	90.8	78-114%
Nitrogen, Nitrate	GP14954/GN29308	0.010	0.0	mg/l	0.1	0.102	102.0	90-110%
Nitrogen, Nitrite	GP14954/GN29308	0.0040	0.0	mg/l	0.05	0.0507	101.4	90-110%
Solids, Total Dissolved	GN29294	10	0.0	mg/l	400	403	100.8	90-110%
Sulfate	GP14954/GN29308	0.50	0.0	mg/l	5	5.16	103.2	90-110%
Total Organic Carbon	GP14986/GN29362	1.0	0.0	mg/l	5	5.03	100.6	90-110%
pH	GN29312			su	8.00	7.98	99.6	99.1-100.9%

Associated Samples:
Batch GN29294: D69171-1
Batch GN29312: D69171-1
Batch GP14951: D69171-1
Batch GP14954: D69171-1
Batch GP14986: D69171-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP14951/GN29301	mg/l	40	35.9	1.1	20%

Associated Samples:
Batch GP14951: D69171-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN29294	D69024-1	mg/l	1830	1850	1.1	0-20%
Total Organic Carbon	GP14986/GN29362	D69277-3	mg/l	1.5	1.5	0.0	0-20%

Associated Samples:
Batch GN29294: D69171-1
Batch GP14986: D69171-1
(*) Outside of QC limits

7.3
7

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP14954/GN29308	D69186-3B	mg/l	130	50	184	108.0	80-120%
Fluoride	GP14954/GN29308	D69186-3B	mg/l	0.0	10	10.2	102.0	80-120%
Fluoride	GP14954/GN29308	D69186-3B	mg/l	0.11	10	10.2	102.0	80-120%
HEM Oil and Grease	GP14951/GN29301	D69022-1	mg/l	10.2	40	45.1	87.3	78-114%
Nitrogen, Nitrate	GP14954/GN29308	D69186-3B	mg/l	0.27	1	1.4	113.0	80-120%
Nitrogen, Nitrate	GP14954/GN29308	D69186-3B	mg/l	0.24	1	1.4	113.0	80-120%
Nitrogen, Nitrite	GP14954/GN29308	D69186-3B	mg/l	0.015	0.5	0.49	98.0	80-120%
Nitrogen, Nitrite	GP14954/GN29308	D69186-3B	mg/l	0.0	0.5	0.49	98.0	80-120%
Sulfate	GP14954/GN29308	D69186-3B	mg/l	239	50	293	108.0	80-120%
Total Organic Carbon	GP14986/GN29362	D69277-3	mg/l	1.5	10	11.4	99.0	80-120%

Associated Samples:
Batch GP14951: D69171-1
Batch GP14954: D69171-1
Batch GP14986: D69171-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

7.4

7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D69171
Account: KPKCOD - K.P. Kauffman Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP14954/GN29308	D69186-3B	mg/l	130	50	182	1.1	20%
Fluoride	GP14954/GN29308	D69186-3B	mg/l	0.0	10	9.9	3.0	20%
Fluoride	GP14954/GN29308	D69186-3B	mg/l	0.11	10	9.9	3.0	20%
Nitrogen, Nitrate	GP14954/GN29308	D69186-3B	mg/l	0.24	1	1.3	7.4	20%
Nitrogen, Nitrate	GP14954/GN29308	D69186-3B	mg/l	0.27	1	1.3	7.4	20%
Nitrogen, Nitrite	GP14954/GN29308	D69186-3B	mg/l	0.015	0.5	0.49	0.0	20%
Nitrogen, Nitrite	GP14954/GN29308	D69186-3B	mg/l	0.0	0.5	0.49	0.0	20%
Sulfate	GP14954/GN29308	D69186-3B	mg/l	239	50	290	1.0	20%
Total Organic Carbon	GP14986/GN29362	D69277-3	mg/l	1.5	10	11.3	0.9	20%

Associated Samples:
Batch GP14954: D69171-1
Batch GP14986: D69171-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

7.5

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